

Application No.: 09/741,072

Docket No.: OBLON3457-C

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AMENDMENTTo the Claims:

Please amend the claims as follows.

Claim 1. (Previously presented) A wafer polishing head for planarizing a wafer, comprising:

a carrier for loading the wafer;

a wafer adhering layer disposed beneath the carrier;

a retaining ring surrounding the carrier and the wafer adhering layer;

a first pressure chamber having a first inner pressure disposed above the retaining ring;

a second pressure chamber having a second inner pressure disposed on the carrier, wherein a relative height between the retaining ring and the carrier can be adjusted by changing the first and second inner pressure; and

an automatic control system respectively coupled to the first pressure chamber and the second pressure chamber for adjusting a relative height between the carrier and the retaining ring, wherein the automatic control system comprising a converting device for transforming the first and second inner pressure into feedback digital signals, and a controlling device coupled to the converting device for comparing the feedback digital signals and producing digital signals from the feedback digital signals, and a regulating

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device coupled to the controlling device for transforming the digital signals into the pressure values for adjusting fluid pressures in the first and second pressure chambers.

Claim 2-3 (canceled)

Claim 4. (original) The wafer polishing head of claim 1, wherein the second pressure chamber is partly filled by a liquid with a relatively low volatility and a relatively low chemical reactivity.

Claim 5. (original) The wafer polishing head of claim 1, wherein the first feedback pressure signal denotes the first inner pressure.

Claim 6. (original) The wafer polishing head of claim 1, wherein the second feedback pressure signal denotes the second inner pressure.

Claim 7. (Previously presented) A wafer polishing head for planarizing a wafer, comprising:

a carrier for loading the wafer;

a retaining ring surrounding the carrier;

a first pressure chamber having a first inner pressure disposed above the retaining ring;

a second pressure chamber having a second inner pressure disposed on the carrier;

and

an automatic control system respectively coupled to the first pressure chamber and the second pressure chamber for processing the first and second inner pressures as feedback digital signals, comparing the feedback digital signals, and producing digital signals from the feedback digital signals to control a relative height between the carrier and the retaining ring through the first and second pressure chambers.

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Claims 8-10 (canceled)

Claim 11. (original) The wafer polishing head of claim 7, wherein the second pressure chamber is partly filled by a liquid possesses a relatively low volatility and a relatively low chemical reactivity.

Claims 12-13 (canceled)

Claim 14. (Previously presented) A wafer polishing head for planarizing a wafer comprising a carrier for loading the wafer, a wafer adhering layer disposed beneath the carrier, a retaining ring surrounding the carrier, the wafer adhering layer, a first pressure chamber having a first inner pressure disposed above the retaining ring, and a second pressure chamber having a second inner pressure disposed on the carrier, the wafer polishing comprising:

an automatic control system respectively coupled to the first pressure chamber and the second pressure chamber, the automatic control system comprising converting devices for transforming the first and second inner pressures into feedback digital signals, a controlling device coupled to the converting devices for comparing the feedback digital signals and producing digital signals from the feedback digital signals, and regulating devices coupled to the controlling device for transforming the digital signals into pressure values to adjust a relative height between the carrier and the retaining ring.

Claim 15. (canceled)